

Listing of Claims:

1. (Currently Amended) A microscopic image capture apparatus, comprising:

a low magnification optical system and a high magnification optical system;

5 a macro image capture unit which captures an image of wide-angle view of an entire observing slide by the low magnification optical system;

10 a sample image area extraction unit which extracts a sample image area in which a sample image exists from the image of wide-angle view captured by the macro image capture unit;

15 a height coordinate acquisition position setting unit which automatically sets a plurality of positions in an XY direction* over the sample image area extracted by said sample image area extraction unit in each of which a height coordinate Z is acquired;

a replacing unit which replaces the low magnification optical system with the high magnification optical system;

20 a coordinate read unit which reads a height coordinate of a focal point position of the high magnification optical system in each of the positions in the XY direction* set by said height coordinate acquisition position setting unit;

a focal point adjusted position computation unit which computes an adjusted position of a focal point in an arbitrary

position in the sample image area using height coordinate data

25 read by said coordinate read unit over the sample image area; and

a sample travel unit which transfers a height of a sample to the adjusted focal position computed by the focal point adjusted position computation unit following horizontal traverse of the sample;

30 wherein said height coordinate acquisition position setting unit respectively sets, as each of the positions in which the height coordinate Z is acquired, a position of a different grid point positioned in an area including the sample image in from among grid points of sections obtained by setting a rectangular
35 sample area which bounds the sample image area and dividing the set rectangular sample image area at predetermined intervals in grid form as one of the positions in which the height coordinate Z is acquired.

*should this be "an xy plane"?

2. (Previously Presented) The apparatus according to claim 1, wherein said coordinate read unit performs autofocus processing with the sample horizontally traveled to a set position, and reads a height position of said sample travel unit
5 after completion of the autofocus processing as the height coordinate.

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Claims 3-11 (Canceled).